Greenlands's Untapped Gift to the Modern World

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"Specialty Metals for a Greener World"

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JORC Compliance – Consent of Competent Persons

The information in this report that relates to exploration results, geological interpretations, appropriateness of cutoff grades, and reasonable expectation of potential viability of quoted rare earth element, uranium, and zinc resources is based on information compiled by Jeremy Whybrow. Mr Whybrow is a director of the Company and a Member of the Australasian Institute of Mining and Metallurgy (AusIMM). Mr Whybrow has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined by the 2004 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Whybrow consents to the reporting of this information in the form and context in which it appears.

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Greenland Minerals and Energy Evolution

1. *Acquired a license over the northern Ilimaussaq Complex located in south Greenland in mid-2007 in a JV agreement*

2. *License contained historic uranium deposit, and area known to be highly prospective for specialty metals – particularly REEs*

3. *Large exploration programs completed to dramatically increase resources*

4. *Greenland reviewing uranium policy; projects with uranium by-product can now be studied*

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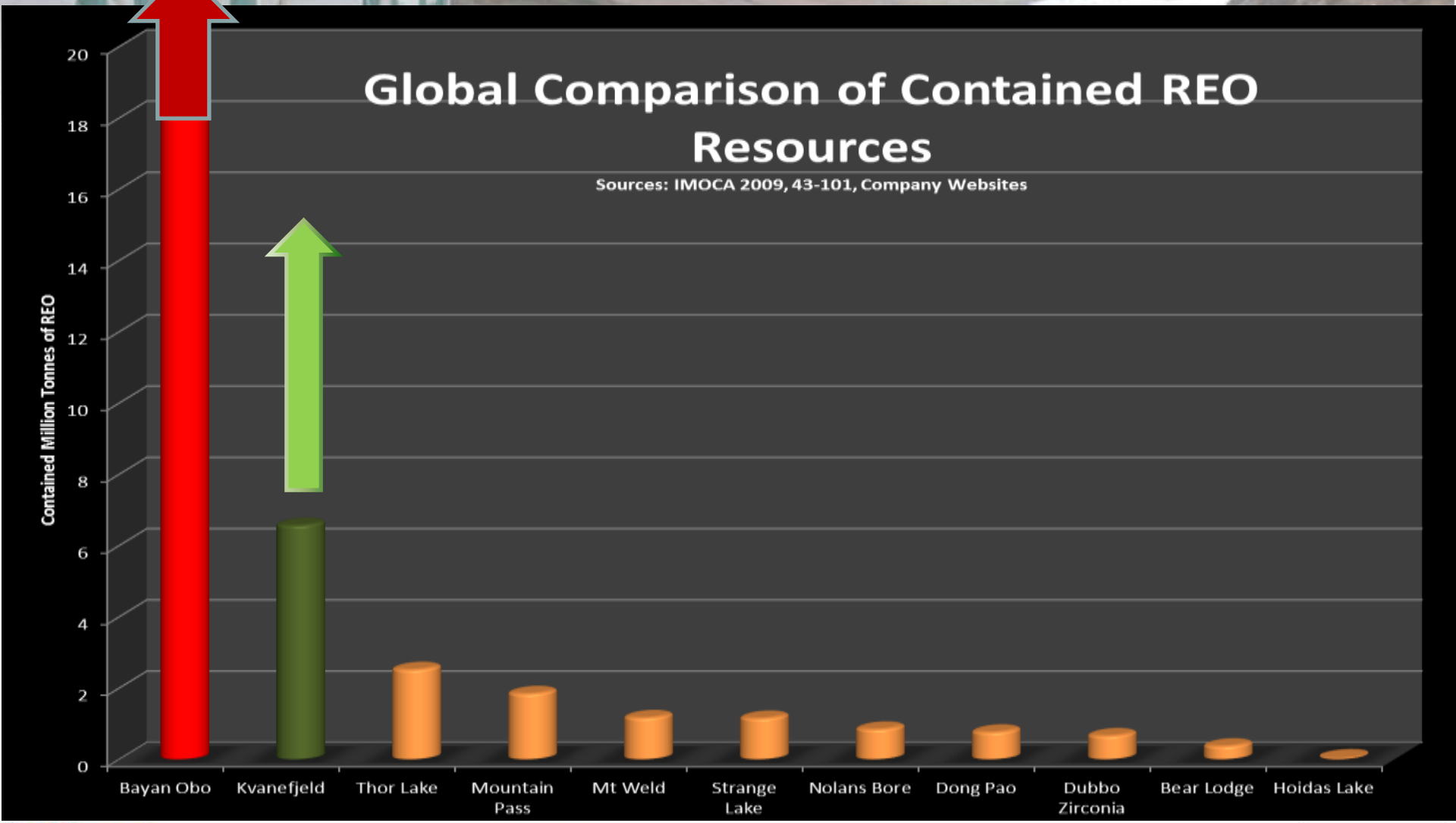
Big Picture: It's Really Us and China



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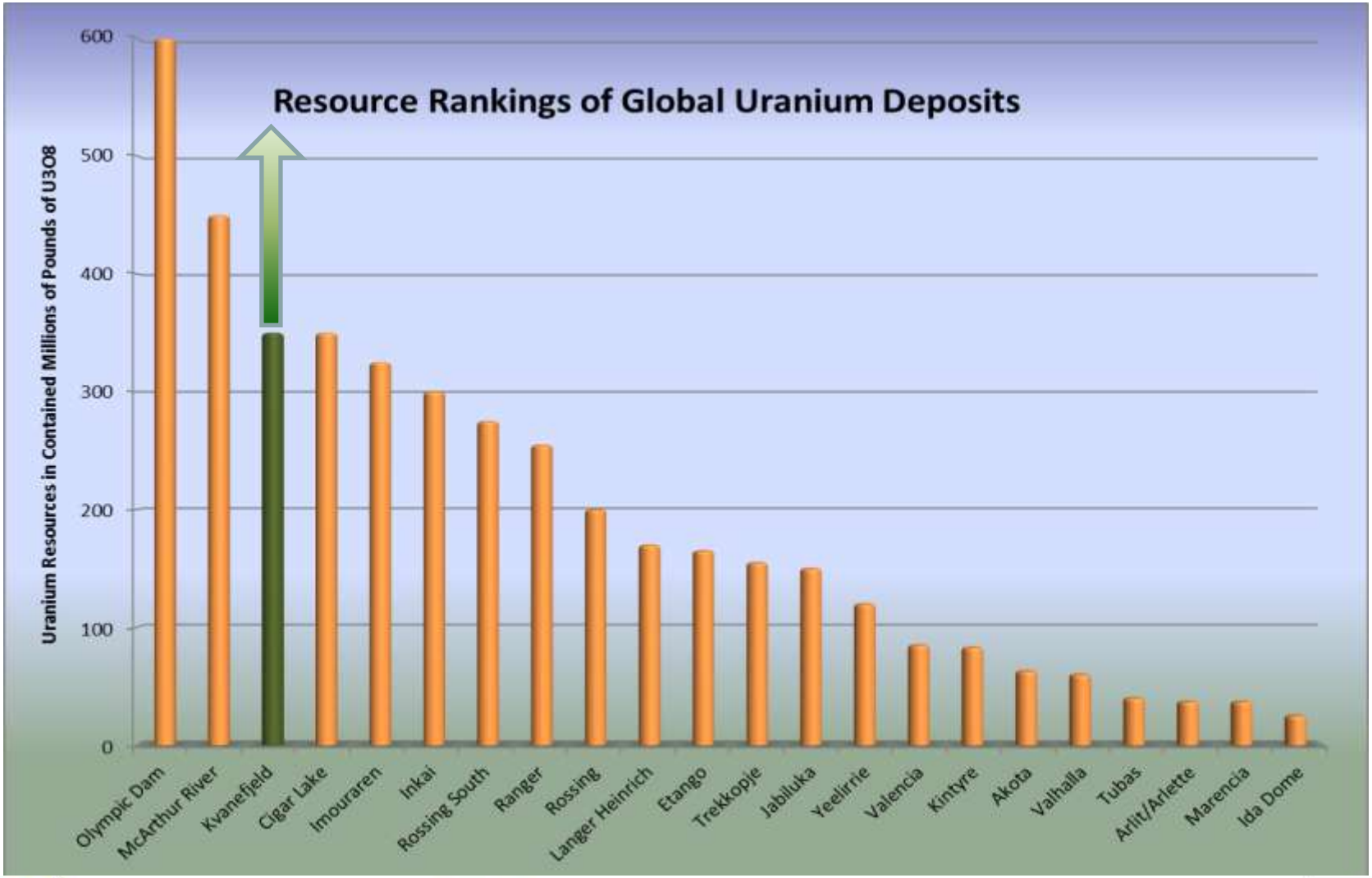
Mammoth U_3O_8 Resource Too!



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Greenland

An Emerging Mineral Province

Politically stable democracy:

- *Autonomous constituent country within Kingdom of Denmark*
- *Increasing independence with transition from Home Rule to Self Rule*
- *Pro-mining government – increased independence is dependant on establishing strong minerals and hydrocarbon industries*

Extremely prospective:

- *Diverse geology exposed around coastal fringe*
- *Underexplored, yet strong geological survey, quality service providers*
- *High potential for world-class ore bodies near surface*

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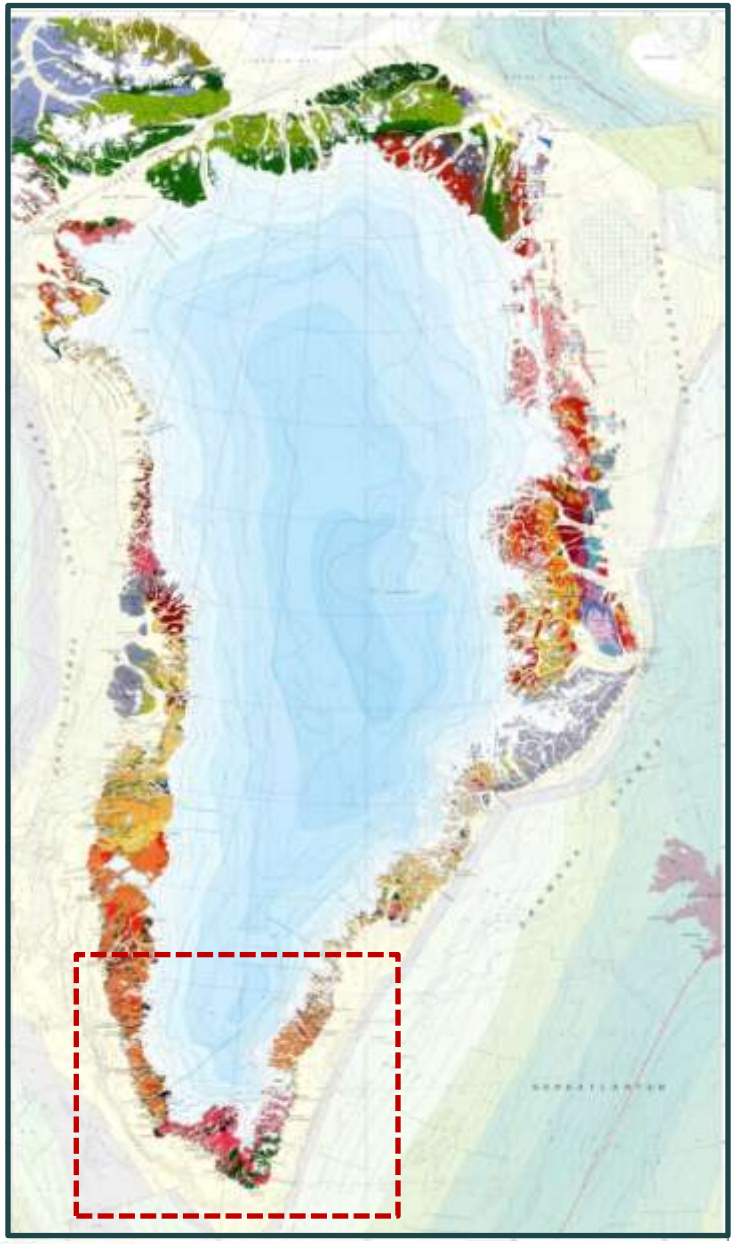
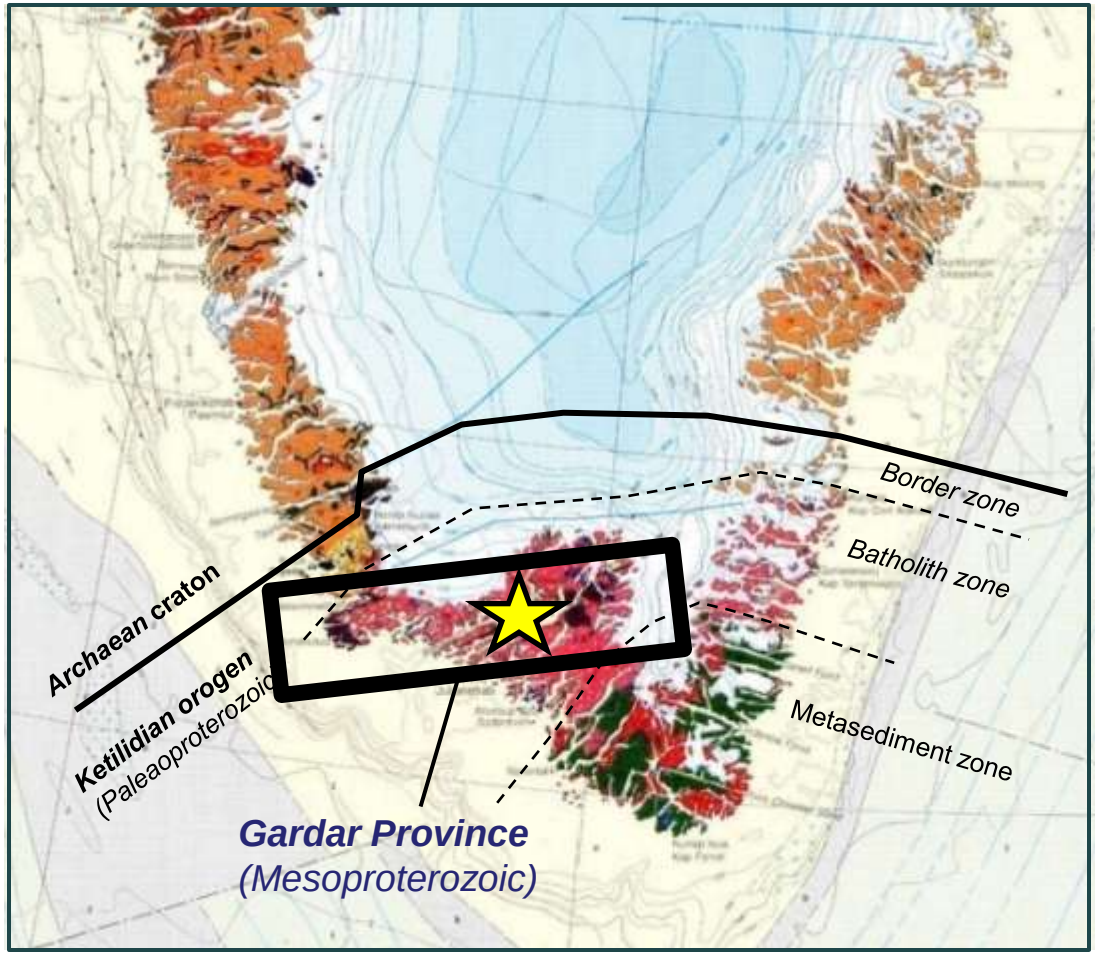
Greenland Geology





Gardar Province – Alkaline intrusions emplaced in a continental rift setting ***(e.g. Ilimaussaq Complex)***

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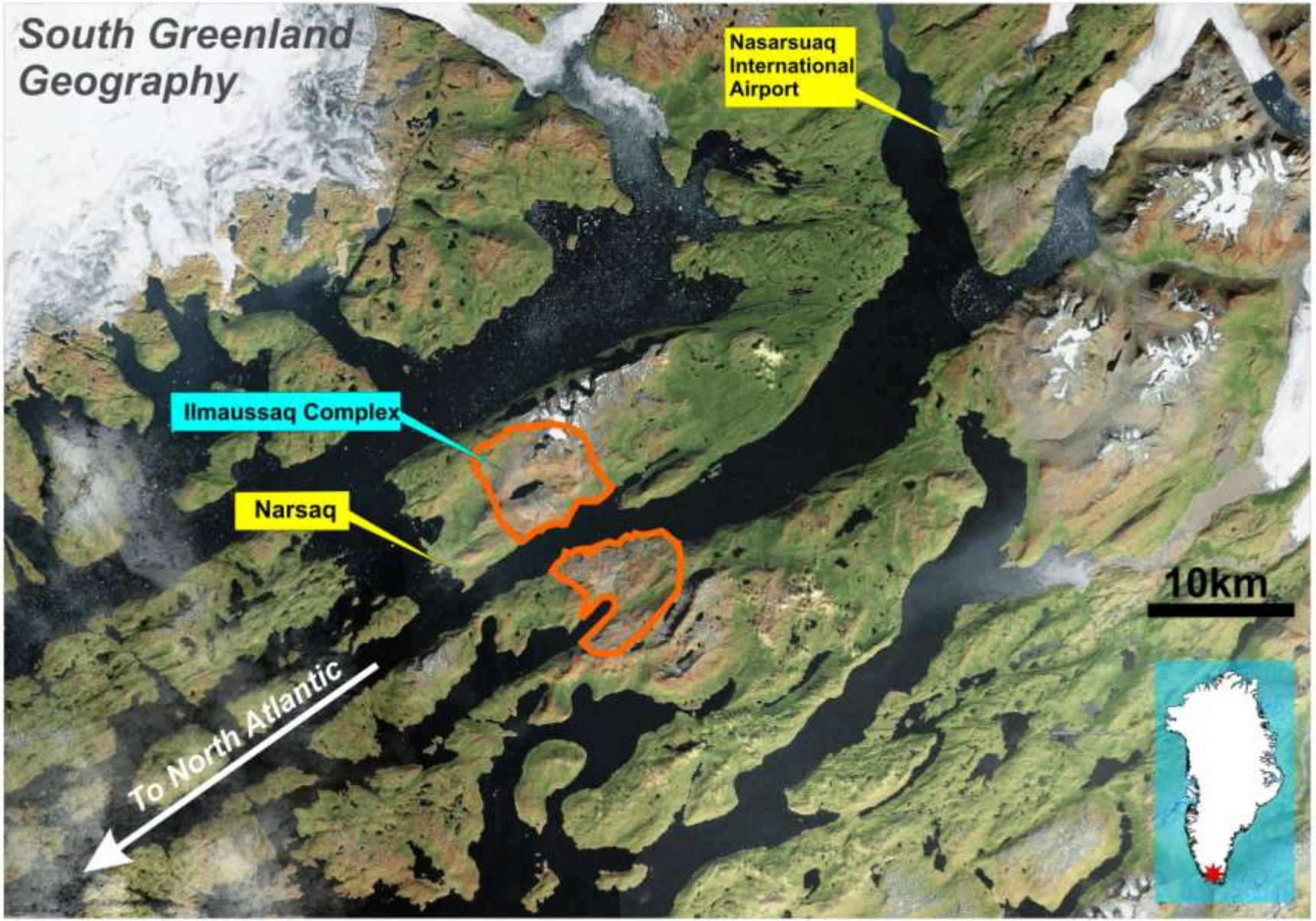

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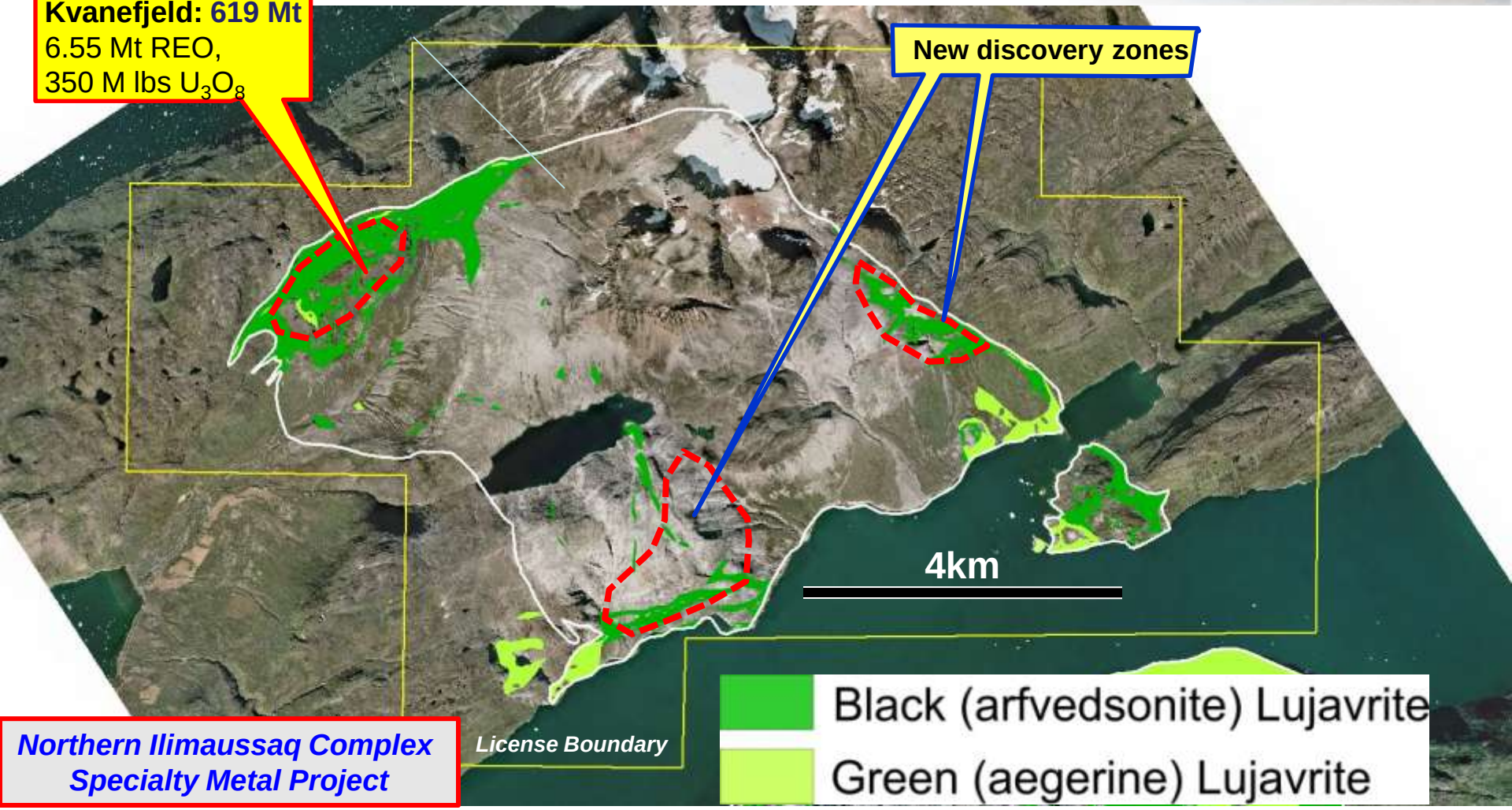
Northern Ilimaussaq Complex

Key Geological Units



Northern Ilimaussaq Complex
Specialty Metal Project

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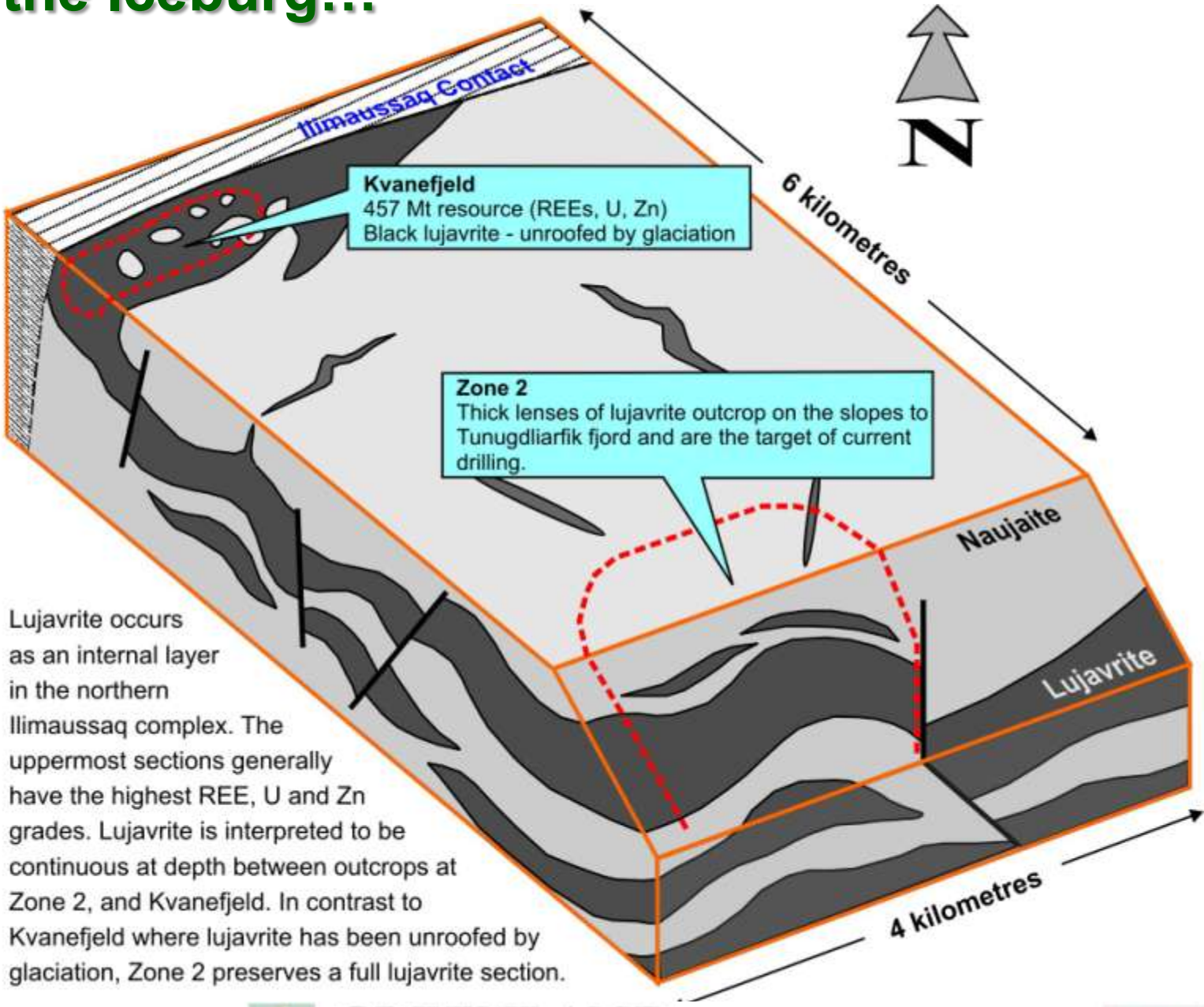
The Tip of the Iceburg…



Lujavrite occurs as an internal layer in the northern Ilimaussaq complex. The uppermost sections generally have the highest REE, U and Zn grades. Lujavrite is interpreted to be continuous at depth between outcrops at Zone 2, and Kvanefjeld. In contrast to Kvanefjeld where lujavrite has been unroofed by glaciation, Zone 2 preserves a full lujavrite section.

Kvanefjeld – March 2011 Resources

Cut-off	Category	Tonnage	REO	U3O8	Zn
U3O8 ppm	*(JORC)*	*Mt*	*%*	*%*	*%*
150	Indicated	437	1.09	0.0274	0.2212
150	Inferred	182	0.98	0.0216	0.2134
150	Grand Total	619	1.06	0.0257	0.2189
250	Indicated	231	1.23	0.0352	0.2363
250	Inferred	41	1.13	0.0324	0.2598
250	Grand Total	272	1.22	0.0347	0.2398
350	Indicated	111	1.37	0.0404	0.2487
350	Inferred	12	1.37	0.0403	0.2826
350	Grand Total	122	1.37	0.0404	0.2519

1) Uranium cut-off grades used owing to greater assay coverage; 2) TREO = rare earth elements plus yttrium

JORC – Compliant, >70% Indicated

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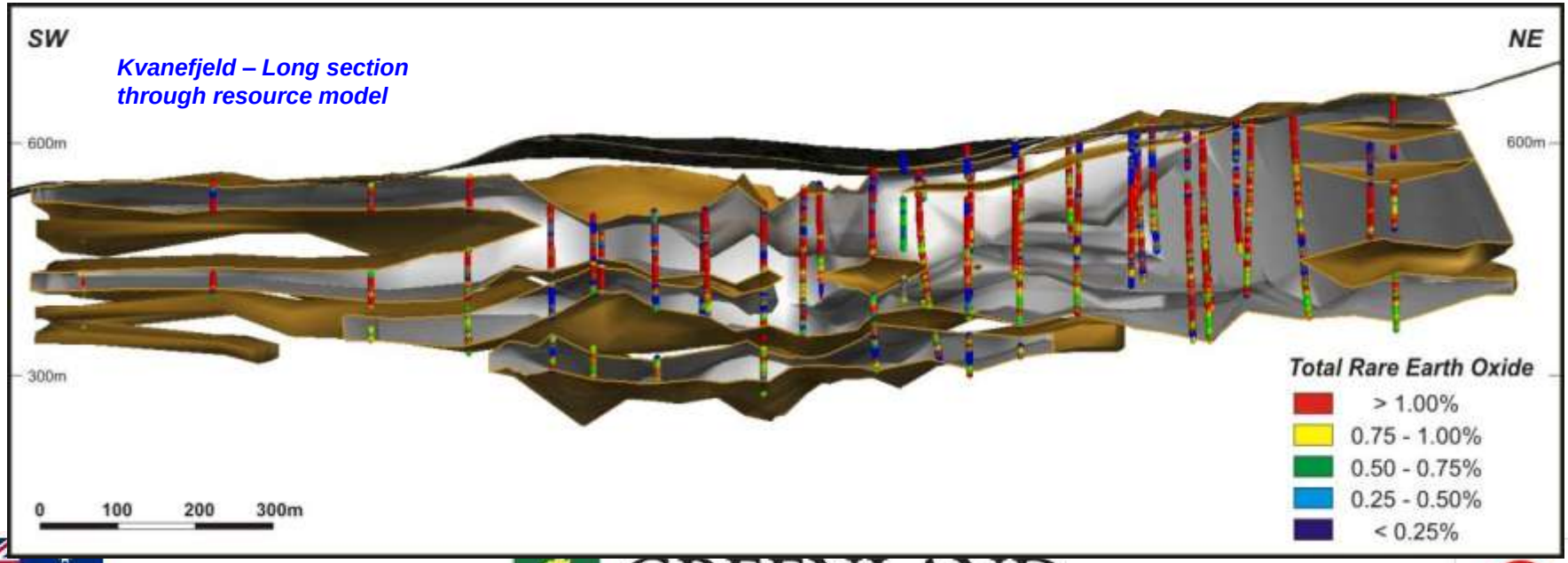
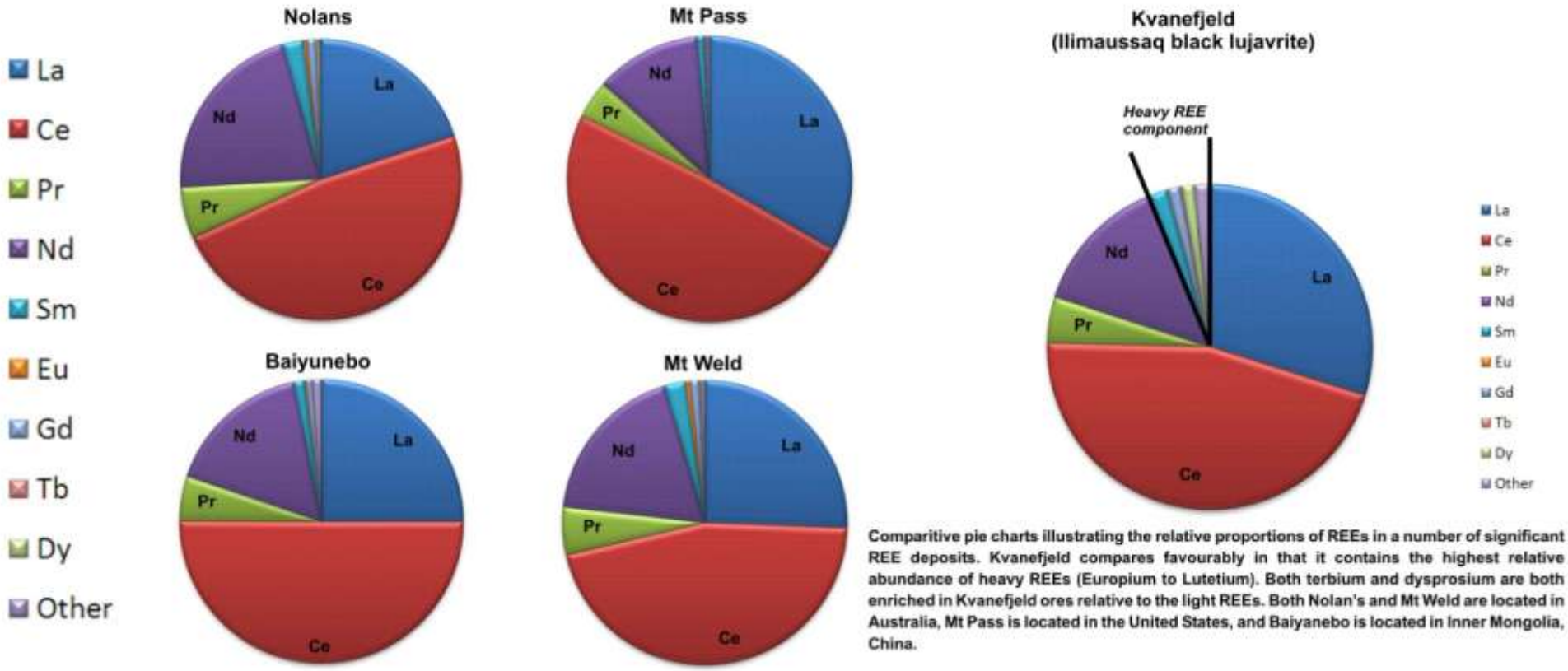
Kvanefjeld – Resource Details

- **619 Mt resource, mostly outcropping and within 300m of ground surface**
- **Low strip ratio**
- **Highest grades are in the near-surface environment:**
  - Grades range from *>350 ppm U_3O_8, 1.3% REO near surface*, to 200 ppm U_3O_8 and 1% REO below 250 m depth
- **Resource is located 7 km from tidewater, with deep water fjords running directly out to North Atlantic Ocean, potential for hydropower, international airport 40 km away**



Relative Abundance of Individual Rare Earth Elements in Select Deposits



Comparitive pie charts illustrating the relative proportions of REEs in a number of significant REE deposits. Kvanefjeld compares favourably in that it contains the highest relative abundance of heavy REEs (Europium to Lutetium). Both terbium and dysprosium are both enriched in Kvanefjeld ores relative to the light REEs. Both Nolan's and Mt Weld are located in Australia, Mt Pass is located in the United States, and Baiyanebo is located in Inner Mongolia, China.

Nice Spread of Light and Heavy REE in Kvanefjeld – Not too heavy and not too light : Just Right

La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Y
27.5	42.0	4.2	12.9	1.6	0.1	1.1	0.2	1.1	0.2	0.6	0.1	0.5	7.7

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Kvanefjeld: Pre-Feasibility Study

- ***Initial priority:*** demonstrate that REEs and uranium can be extracted economically from what is a *"new ore type"*
- ***Interim PFS Report*** *released early 2010, outlining a viable base case mining scenario to produce a rare earth concentrate and uranium oxide product*
  - *Report integrates the outcomes of historical Danish studies and those conducted by GMEL, and presents a viable process flow sheet*
- Significant changes to the base case process flow sheet are expected to enhance economics
- Prefeasibility update report expected 2011

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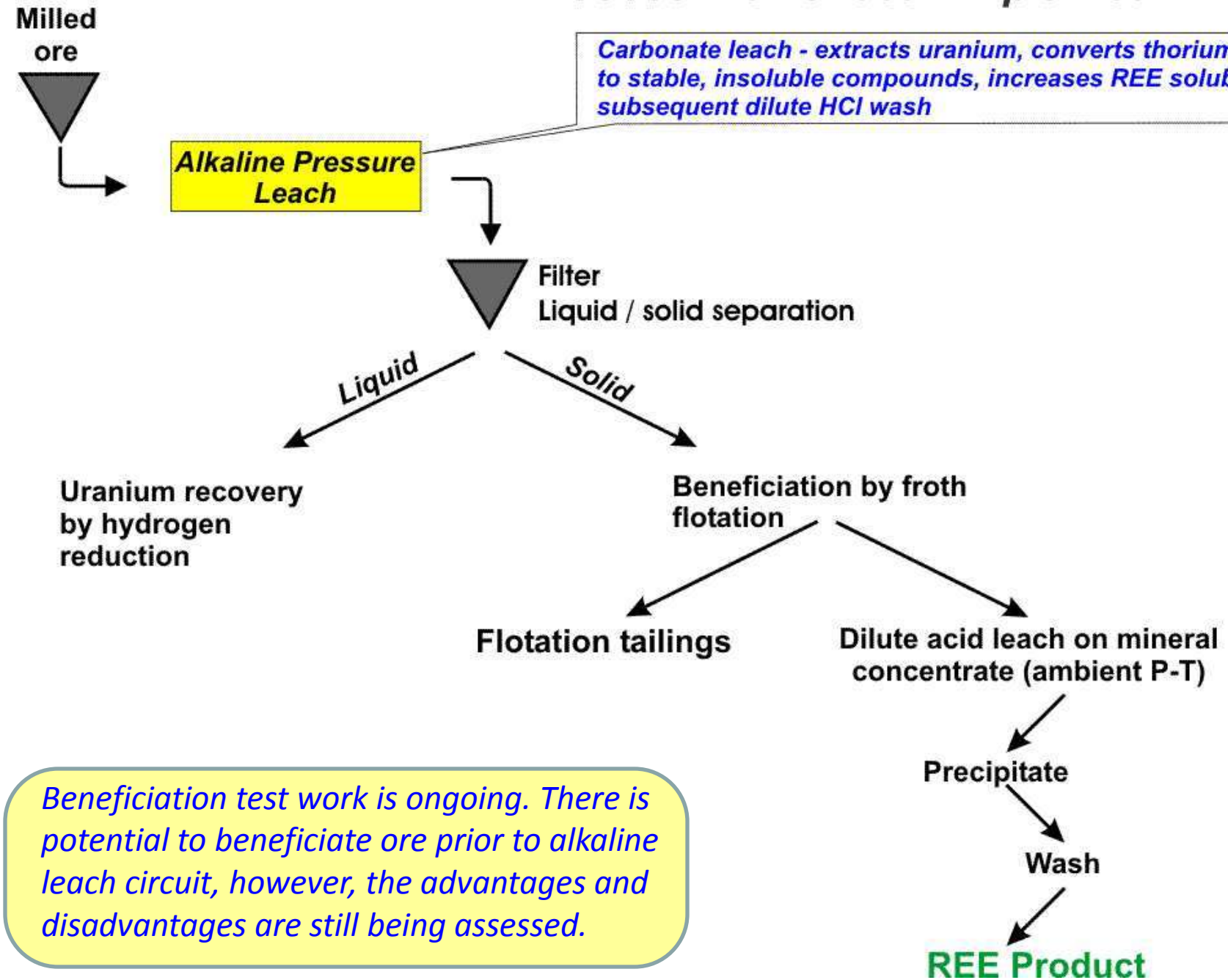
Process Flowsheet - Explained

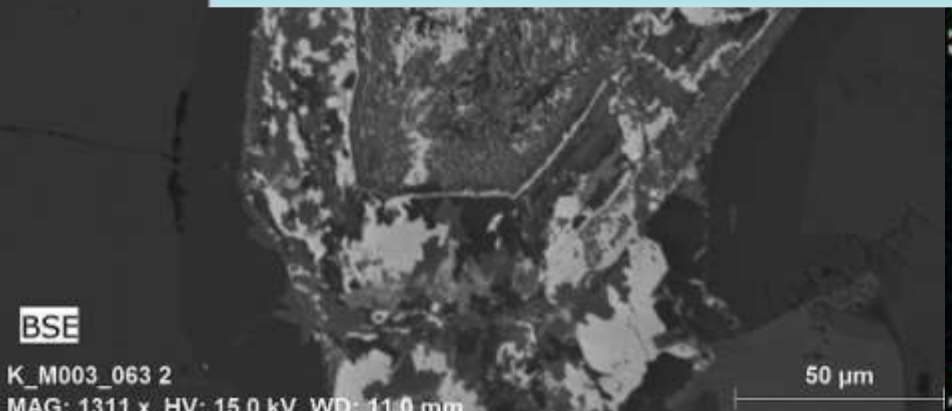


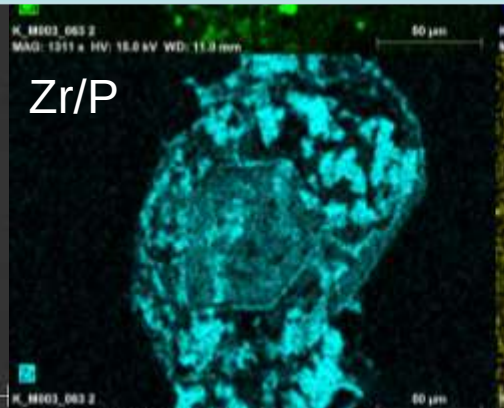
Beneficiation test work is ongoing. There is potential to beneficiate ore prior to alkaline leach circuit, however, the advantages and disadvantages are still being assessed.

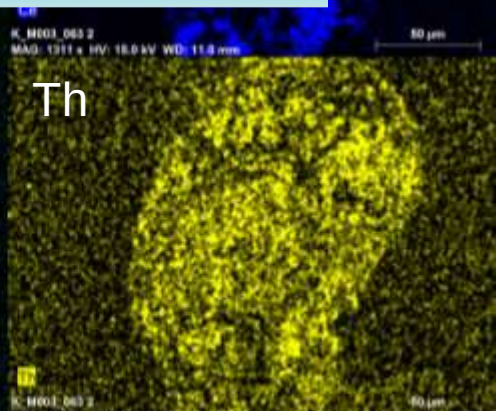
Continued Process Development

OT3

- Flow sheet Sub-Optimal
- Only 34% Rare Earth Recovery
- Recent Testwork Showing Promise







Interim PFS Report: Key Outcomes

- Processing rate of **10.8 Mtpa**
- Forecast nominal production of **43,729 t of REO, and 3,895 t U_3O_8 pa**
- Life of mine throughput: 239 Mt @ 1.01%TREO and 314ppm U3O8
- 23 year mine life

Break-even price @ 10% discount: **U_3O_8 – US$37.47/lb, REO – US$5.75/kg**

Unit Costs: **U_3O_8 – US$29.60/lb, REO – US$3.36/kg**

Capital Costs - **US$ 2.31 billion***

Inclusive of: mine infrastructure, new port and power generation facilities, roads, accommodation village, and processing and refining capacity for RE carbonate and uranium oxide production at throughput of 10.8 Mtpa,

*Includes ***US$380m*** contingency (20% of cost), and 30% increase on labour costs

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Current Focus

- **Process Development** - *aiming for efficiency*
  - Mineralogical, leaching and beneficiation studies well advanced and will result in significant flowsheet enhancements
- **Resources –** *expand and define higher grade zones*
  - Mineral mapping – resource domained by ore mineral assemblage
  - ✓ New resource estimate released March 2011
  - Optimised mine schedule to follow
- **Feasibility Studies** – *ramping up in 2011*
  - Launch *Social* and *Environmental* Impact Assessments
  - Definitive feasibility study to commence in Q3 2011

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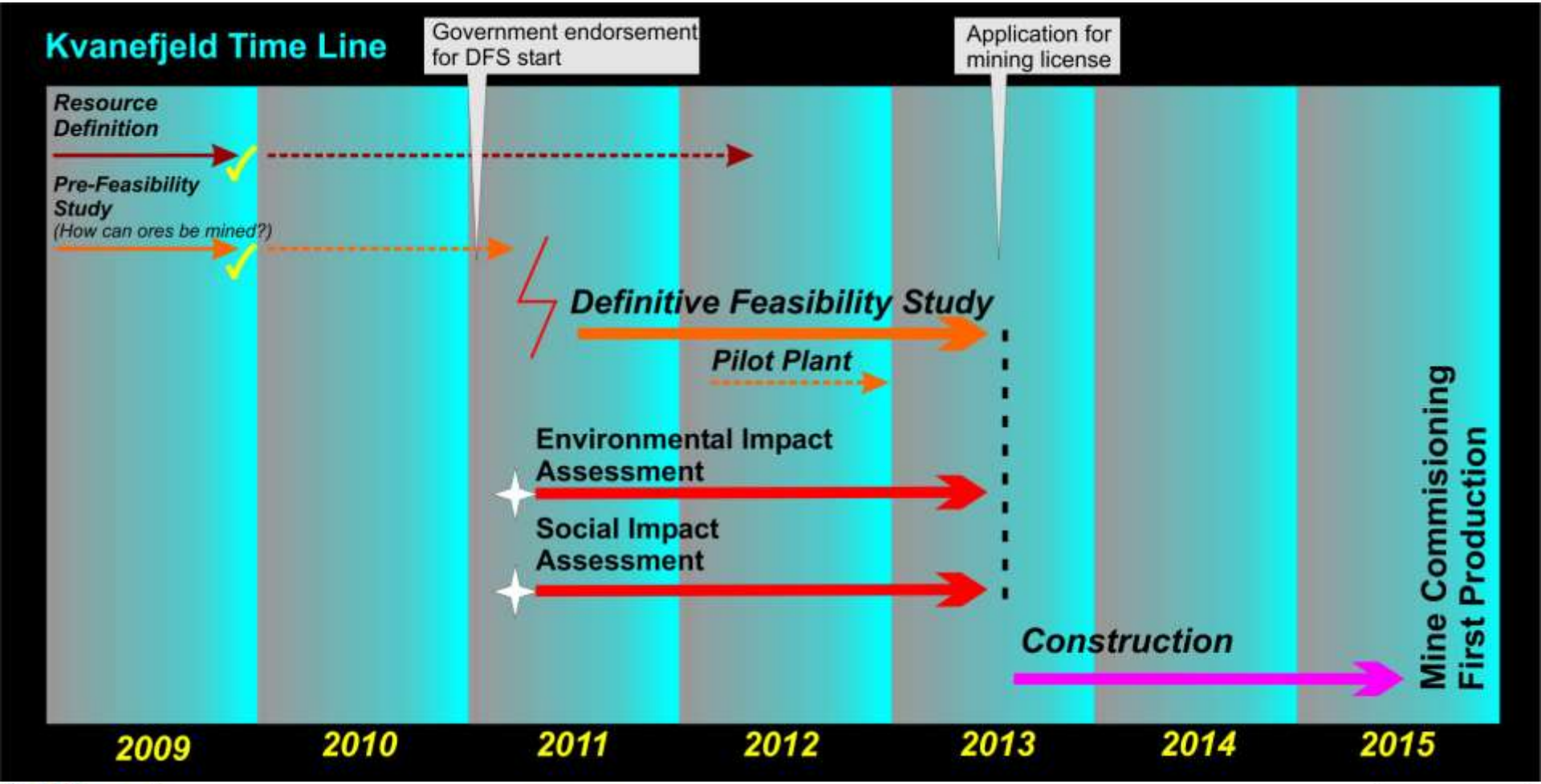
Looking Forward



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Site visit to Kvanefjeld project area, September 2nd, 2009

The Honorable Mr Ove Karl Berthelsen (Minister for Commerce and Raw Materials); Dr John Mair (Greenland Minerals); Mr Simeon Simenson (Mayor of South Greenland); Mr Jørn Skov Neilson (Director of Bureau of Minerals and Petroleum)

Great Stakeholder and Community Support

- ✓ *South Greenland Municipal Council*
- ✓ *Mayor of south Greenland*
- ✓ *Labour Union (SIK)*
- ✓ *Employers Union*
- ✓ *Mining and trade schools*

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Employment and Training

Part of the Greenland Minerals field team at the Kvanefjeld camp

Company geologist Aajus Simonsen explains drill core logging at open day

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Greenland

An Emerging Mineral Province

Important political development in relation to radioactive elements in September 2010

- *New amendment to the **'Standard Terms for Exploration Licenses'***

- *The amendment allows for, upon government approval, **the full evaluation and reporting on mineral projects that include uranium***

- *Provides a framework for projects that include radioactive materials to be fully evaluated through a definitive feasibility study*

- *Permitting is then based on study outcomes with an emphasis on environmental and social considerations*

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SUMMARY

Aiming to develop one of the worlds largest REE and uranium resources

- *World class JORC-compliant multi-element resource with enormous upside*
- *Large, Low Cost, Long Life, Expandable Multiple Times*
- ***New amendments** to exploration license terms to **allow for evaluation of projects that include uranium**, strong local community support*
- ***Well positioned for strong growth as Kvanefjeld advances toward development***

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Interim Report: Financial Evaluation

Market Analyses:

- REO product price range US$7.5 – 18.50/kg (IMCOA, BCC)
- Uranium price range US$70 – 90/lb (WNA)
- *Base case assumptions:* ***REO - US$13/kg, U_3O_8 - US$80/lb*** *(2015)*

NPV – @ 10% discount, pre-tax **US$ 2.18 billion***

IRR – **24%**, payback period just over 5 years, inclusive of 2 years of construction *

**based on 34% recovery of REO and 84% for uranium*

Cumulative operating surplus of ***US$8.93 billion***, generating an annual operating surplus of ***US$615 M pa*** for the first five years of production

Over life-of-mine, uranium revenues exceed total production costs *effectively making REO production costs negative.*

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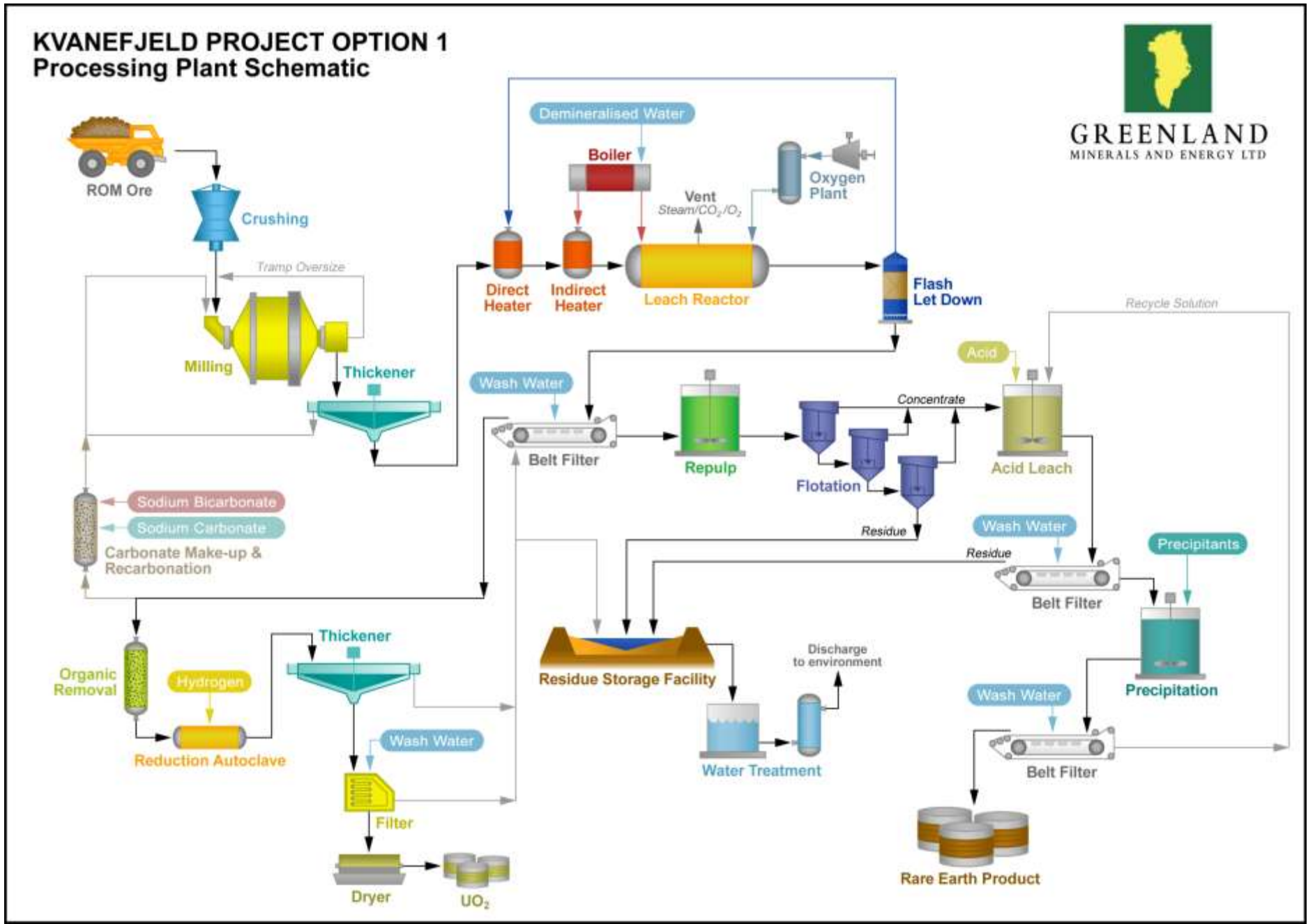
Process flow sheet – base case scenario:

1- alkaline pressure leach uranium extraction; ***2*** - concentrate REE minerals; ***3*** - extract REEs with dilute Hall wash



Greenland Minerals and Energy Ltd is aware of and respects the Greenlandic government stance on uranium exploration and development in Greenland – which is currently a zero tolerance approach to the exploration and exploitation of uranium. Any potential change toward the current stance of zero tolerance is not expected until after the public consultation and review process is concluded in the coming months.

The company is currently advancing the Kvanefjeld Project, recognised as the world's largest undeveloped JORC compliant resource of rare earth oxides (REO), in a multi-element deposit that is inclusive of uranium and zinc.

Greenland Minerals will continue to advance this world class project in a manner that is in accord with both Greenlandic Government and local community expectations, and looks forward to being part of the community discussion on the social and economic benefits associated with the development of the Kvanefjeld Project.